



Application no. 10 / 042,433.

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LISTING OF ALL CLAIMS SHOWING STATUS.

June , 26 , 2003

Claim number	Status / office action	Present Status
1	Pending, Rejected	Cancel old claim, substitute amended claim
2	Pending, Rejected	Cancel old claim, substitute amended claim
3	Pending, Rejected	Cancel old claim, substitute amended claim
4	Pending, Rejected	Cancel old claim, substitute amended claim
5	Pending, Rejected	Cancel old claim, substitute amended claim
6	Pending, Rejected	Cancel old claim, substitute amended claim

I request substitution of all six rejected claims with six amended claims, retaining the same numbers.

Enclosures :

A sheet containing all six original claims which are rejected / pending.

Four sheets of Amended Claims containing Six amended claims.

Application no. 10/042,433.

Text of six claims all of which were rejected vide Office action letter dated May 23, 2003.

- o Your letter also indicates that the claims are pending.
- o I am enclosing a list of all claims with their status as required by the notice.
- o I am enclosing " Revised claims to substitute the six rejected claims". They are treated as new and not underlined.

I Claim,

1. A multi knife cutting device having four embodiments, each embodiment consisting of an assembly of six to eight knives operating in conjunction with a slotted platform which is part of a board, to perform vegetable cutting manually at a faster rate than single knife.
2. A multi knife cutting device according to claim 1, where the four embodiments have, vertical, inclined or rotary-cutting actions, which are based on the way the assembly of knives moves in its cutting stroke.
3. A multi knife cutting device according to claim 1, where the slotted platform made up of thin walls of plastic or other material, performs the tasks of supporting the vegetables before cutting and separation of cut pieces from between the knives after cutting, and where in the slot location matches with the knife position.
4. A multi knife cutting device according to claim 1, where the fourth embodiment has knives which operate independently, to facilitate cutting of whole potatoes and similar vegetables into large slices, as compared to the first three embodiments where all knives are assembled in a frame so that they move together and are designed to cut vegetables of smaller diameter or thickness.
5. A multi knife cutting device according to claim 1, where the knives can be replaced easily, the spacing between knives can be modified, the knife edges do not touch the board after cutting, the effort is reduced due to lever action and the safety is improved by keeping the hand away from the cutting edges.
6. A multi knife cutting device according to claim 1, where the embodiment named device B heavy duty model, can be used for cutting vegetables with knife assembly at the top or the knife assembly at the bottom, in which latter case the cut pieces fall down from the device making the operation simpler.

CLAIMS.

I claim :

1. (new) A multi knife cutting device comprising :

- Five embodiments having common features of multiple knives as cutting means functioning in combination with slotted guide frames cum base structures,
- concurrently having distinctive structural features in each embodiment which facilitate characteristic methods of cutting.

2. (new) A multi knife cutting device according to claim 1, wherein the first embodiment is device A comprising:

- a base structure with distinctive features like, the vegetable support frame with slots to receive the knives after the cut, the bottom half of the telescopic guide, the coil spring around the telescopic guide, and the lever type handle pivoting on angle supports,
- a distinctive inverted U type of frame assembled on which are seven knives, the top half of the telescopic guide, a block of wood on which the handle rests,
- a characteristic telescopic guide the top half being bolted to the knife frame, the bottom half fixed to the base, to make the knife assembly move in vertical plane and matches the knives with the slots in vegetable support,
- a coil spring around the telescopic guide on which the knife frame rests in the start position, distinctively enables the knife assembly to return to start position after the cut,
- distinctive features of:

vertical cutting action to eliminate sliding of vegetables on the support which is common in inclined cutting devices,

spring return of the knife assembly after the cut , ensuring safety,

cut pieces are clear from the knives because the knives go into slots below the support after the cut,

no need to hold vegetable by hand during cutting and fast cutting due to multiple knives, high mechanical advantage due to the lever action of long handle.

3. (new) A multi knife cutting device according to claim 1, wherein the second embodiment is device B comprising :

- a characteristic slotted guide frame with enclosed platform for vegetables, wherein seven guides form six slots for housing and guiding the knives, wherein the knives are mounted

on a fulcrum ,the slotted guide frame having two angles attached to it at the bottom to increase stability and to fit an end stop to limit the bottom position of the knife,

- six knives mounted on a fulcrum bolt in the guide frame eliminating a separate knife frame, making the device compact, avoiding the interference of the separate frame with the vegetables, wherein handles are attached to the knives to increase mechanical advantage, wherein the knives have an inclined cutting action due to pivot action, wherein each knife enters a slot in the guide frame after cutting the vegetables, also wherein the knives are assembled in such a way that all six can be used at a time or four first and then two in case of larger vegetables.
- the distinctive features, made possible by the slotted guide frame ,
 - wherein the vegetable enclosure is right next to the knives, reducing the lever arm of the load resulting from cutting,
 - wherein the enclosure results in reducing the effective length of the knife as beyond the enclosure the guides restrict knife side movement, this length reduction minimizing the side bending which results in smooth cutting,
 - wherein the guides in the frame continuously guide the knives through out the cut, to facilitate smooth entry into slots below the platform, resulting in smooth cutting and separation of cut pieces from knives,
 - wherein the closed enclosure eliminates the need for holding the vegetables by hand during cutting,
 - wherein the knife edges are protected by the end stop mounted on the frame.
 - wherein the vegetables can be cut without the problems of pieces getting stuck between the knives, or incomplete cuts or knives bending and going out of alignment common with prior art.

4. (new) A multi knife cutting device according to claim 1, in which the third embodiment is device B Variation, comprising:

- a characteristic base frame made of aluminum flats to fixedly accommodate six knives as cutting means, wherein provision is made to mount seven guides on a fulcrum bolt at one end of the frame and in which ,the fixed knives positioned at the bottom as compared to the guides, serve as support for the vegetables in contrast to earlier devices where the knives are not stationary and do not support the vegetables,
- a distinctive guide frame assembly mounted on a fulcrum on the base frame and fitted with handle for lever action, forming a rectangular slot on the top of knives for positioning the vegetables, in the start position with the handle in vertical position, the

guides continuously in touch with the knives and which when moved down in an arc with the handle performs the cut,

- a distinctive cutting action performed by the guides pushing the vegetables through the knives,

where there is no need to push the cut pieces from the vegetable support as they fall down by gravity, saving time due to multiple cuts and elimination of the pushing element,

- distinctive features resulting from the structure explained above in this claim, like:
guides in contact with the knives throughout the cut restricting bending of knives and eliminating misalignment of knives with guides, achieving a clean cut, eliminate problems of incomplete cuts, cut pieces remaining between the knives, common with prior art.

5. (new) A multi knife cutting device according to claim 1, where the fourth embodiment is device C , comprising:

- a cutting means which is a characteristic combination of six circular/rotary knives mounted on a common handle made up of individual elements of plastic laminate inserted between the knives and bolted together with a spacer to provide clearance,
- a base board with grooves on the surface matching with the knife spacing , for the knives to move, wherein there is a distinctive end stop cum guide containing slots matching with knife spacing mounted at the edge of the board, with the board before the end stop being the location for keeping the vegetables on the grooves,
- a characteristic rotary cutting action of circular knives, the cut pieces from between the knives getting removed ,when the knives pass through the end stop slots,
- distinctive feature of using multiple rotary knives concurrently in a compact ,novel device to cut vegetables without the pieces getting stuck between the knives, which is a problem with the prior art.

6. (new) A multi knife cutting device according to claim 1, in which the fifth embodiment is device D comprising:

- a slotted guide frame, distinctively multi functional in having an enclosed platform for vegetables right next to the knives in vertical position , having seven guides form six slots for locating and guiding the knives, having a mounting hole for the fulcrum bolt of the knives, having slots to receive the knives after they complete the cut, providing support for mounting two boards on either side of the enclosure, wherein there is an end stop to limit the travel of the knives at the end of cut,

six knives mounted directly on a fulcrum bolt in the slotted guide frame ,making possible distinctive features comprising:

the direct mounting eliminating the need for a separate frame and avoiding the resultant problems of interference of the frame with the vegetables,
wherein the knives move in an inclined action to cut the vegetables, fully guided by the guides in the frame for smooth entry into slots below the vegetables after the cut,

extended handles independently mounted on each knife, wherein there is flexibility of using a combination of six knives at a time or four plus two combination or two plus two plus two combination depending on the largeness and hardness of the vegetable,

the knives having a large 48x1mm cross section to be able to slice whole potatoes and convert the slices into finger chips, this being a laborious task for standard knives,

- two boards mounted one on either side of the vegetable enclosure at the same level, to enable distinctive user friendly operation, the front board for accommodating the extra length of the vegetables, the back one for collecting the cut pieces, the boards together with guide frame assembly having a close similarity to the commonly used board and knife only in appearance, but many times faster in cutting,
- the distinctive features made possible by the slotted guide frame like
 - the vegetable enclosure right next to the knives reducing the lever arm of the vegetable resistance,
 - the reduction in the effective knife length subject to bending loads as the knives are restricted to move sideways by the guides beyond the enclosure, the resultant reduction in knife bending,
 - full guiding of the knives throughout the cut eliminating misalignment between knives and guides,
 - the smooth separation of cut pieces from between the knives as the knives travel beyond the vegetable into the slots of the guide frame,
 - eliminating the need to hold the vegetables because of the closed enclosure,
 - the edge protection of knives as the knives are stopped by an end stop mounted on the frame.